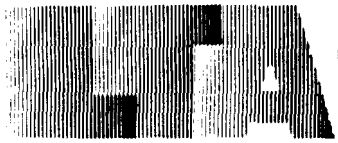

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November 14, 1991

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: RM-7771 of Constellation Communications, Inc., RM-7773 of TRW Inc., RM-7806 of American Mobile Satellite Corporation and RM-7805 of Ellipsat Corporation

Dear Ms. Searcy:

Attached are the Reply Comments of Loral Qualcomm Satellite Services, Inc. in the matter of Petitions for Rulemaking to Amend the Commission's Rules with regard to Low-earth Orbit Satellite Systems Operating in the RDSS Bands.

If you have any questions, please contact the undersigned.

Sincerely yours,

Leslie A. Taylor

Leslie A. Taylor

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Petitions for Rulemaking of	)	
	)	
American Mobile Satellite Corporation	)	RM No. 7806
Constellation Communications, Inc.	)	RM No. 7771
Ellipsat Corporation	)	RM No. 7805
TRW, Inc.	)	RM No. 7773
	)	
To Amend the Commission's Rules with	)	
regard to Low-Earth Orbit Satellite	)	
Systems Operating in the RDSS Bands	)	

REPLY COMMENTS

Loral Qualcomm Satellite Services, Inc. ("LQSS"), by its attorneys, hereby submits its reply comments with regard to the above-referenced rulemaking petitions.[1]

I. The Comments Support Initiation of a Rulemaking Addressing Use of the RDSS Bands for RDSS and Voice and Data Communications

LQSS, in its initial comments, agreed with the petitioners, with the exception of the American Mobile Satellite Corporation (AMSC), that the Commission may want to initiate a rulemaking proceeding addressing revisions to the Commission's rules to allow for the provision of RDSS and voice and data communications from low-Earth orbit satellite systems. LQSS believes that, based on the initial comments filed by other parties, such a rulemaking may furnish the best mechanism to ensure that full use of the RDSS bands can be made by low-Earth orbit satellite systems as soon as possible and in a manner consistent with the Commission's policy of open entry and competition in the provision of communications services.

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[1] By Order of Thomas P. Stanley, Chief Engineer, the time for filing Reply Comments was extended to November 14, 1991. See, DA 91-1340, released October 25, 1991.

LQSS in general agrees with and supports the comments of Constellation Communications, Inc. ("Constellation") and TRW, Inc. ("TRW") that such a proceeding should be implemented as soon as possible.

LQSS does concur, as well, with Motorola that the Commission could process the pending applications without a rulemaking. The Commission must consider at some point adjustments to the RDSS rules which would be required as a result of the pending system applications. All parties, including LQSS and Motorola, have included requests for waivers of the Commission's rules along with their applications, and the Commission could act on these waiver requests, or conduct a parallel rulemaking proceeding.

Based on the filings made with respect to the above-referenced rulemaking petitions, and consistent with its Petition for Rulemaking filed November 4, 1991, LQSS believes that the following issues should be addressed by the Commission in any rulemaking it initiates:

(1) Expansion of RDSS to include voice and data services on a primary basis;

(2) Increasing the power-flux density of the S-band downlink to enable the provision of RDSS, voice and data services to handheld units from low-Earth orbit systems, thereby enhancing the utilization of both the L-band and S-band parts of the RDSS allocation;

(3) Consequential modifications of the technical rules for RDSS, maintaining such rules as are required to ensure opportunity for provision of service by multiple entities, but modifying the rules to enable provision of RDSS, and voice and data service by low-Earth orbit systems;

(4) Allocation of the L-band RDSS spectrum on a bi-directional basis to permit alternative system configurations.

LQSS believes these issues, in general, encompass those raised by Constellation, TRW, Ellipsat, Motorola and LQSS in their respective applications, requests for rule waiver and petitions for rulemaking.

In selecting its course of action the Commission should bear in mind the importance of the proposed services to the United States public and the benefits of approaching revisions to the RDSS rules in a comprehensive and thoughtful manner rather than through a piecemeal approach.

Further, it is important that the open entry and competitive environment that currently exists for RDSS be maintained, for the benefit of the public. This open entry policy would be in contrast to the Commission's determination, in the Mobile-Satellite service proceeding, that one license, issued to a consortium, was required to allow a system to be implemented.[2] As has been amply demonstrated, the consortium approach is fraught with legal perils, evidenced by the still uncertain legal position of AMSC, more than six years after the mobile-satellite service applications were filed.[3] Moreover, technical advances and innovations should be noted, which, in the RDSS, and in the provision of service from low-Earth orbit, make possible provision of service by multiple providers.[4]

II. AMSC's Petition for Rulemaking to Reallocate the RDSS Bands for GSO MSS Systems Should be Dismissed

LQSS believes that the Commission should not have included the AMSC Petition for Rulemaking on the Public Notice with those of Constellation, TRW and Ellipsat. As LQSS stated in its initial comments, the AMSC petition, and its application for modification of its "license," or pending application, were filed in response to a Public Notice specifically requesting applications for RDSS, to be considered in conjunction with the applications of Motorola and Ellipsat for RDSS.[5] AMSC, having invested its time, energy and resources in legal maneuvering, rather than implementing its non-RDSS mobile satellite system, evidently is concerned about the impact of competition from newer technology systems.

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[2] Establishment of Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services, 2 FCC Rcd 485 (1987).

[3] See, Aeronautical Radio, Inc. v FCC, 928 F2d 428 (D.C. Cir. 1991).

[4] See, Application of LQSS for a Low-Earth Orbit Satellite System, File Nos. 19-DSS-P-91 (48) and CSS-91-014, filed June 3, 1991, Appendix 5.

[5] See, Report No. DS-1068, DA 91-407, released April 1, 1991. See Also, Comments of LQSS at pp. 2-3.

LQSS suggests that the Commission should not and need not address the issues raised by AMSC. The Commission should determine, at the outset, that AMSC's Petition should not be considered along with petitions for amendment of the RDSS rules. AMSC's Petition is for reallocation of the RDSS spectrum, to GSO MSS systems, and to itself, on a monopoly basis. This reallocation request does not properly belong in this RDSS proceeding.[6]

Other commenters, including Motorola, Constellation, TRW and Satellite CD Radio, agree with LQSS that AMSC does not propose to provide true RDSS. AMSC will not be utilizing the RF capacity of its satellite to perform the RDSS functions. For this reason alone, neither AMSC's petition for rulemaking nor its application to utilize these frequencies can or should be considered with the applications of LQSS, Motorola, TRW, Constellation and Ellipsat.

III. AMSC Has Not Demonstrated a Need for More Spectrum In General and for the RDSS Spectrum In Particular

If the Commission does not decide to exclude the issues raised by AMSC from a rulemaking considering revisions to the RDSS rules, then, in the context of that rulemaking, it must address whether the proponents of rule changes, such as AMSC, have made a case for use of the RDSS spectrum. As LQSS discussed in its initial comments, and as did Motorola, Constellation, TRW and Satellite CD Radio, AMSC has not made the slightest case for reallocation of the RDSS bands or to itself, on an exclusive basis.

AMSC, which can utilize a spectrum allocation for MSS (an allocation upheld in the U.S. Court of Appeals),[7] has nowhere demonstrated that this allocation is insufficient for provision of the service it proposes. AMSC, with extensive assistance from the U.S.

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[6] Were the Commission to choose to address such contentions, it could properly do so in a separate proceeding, conducted after it has conducted a proceeding with respect to adjustment of the RDSS rules.

[7] Aeronautical Radio, Inc. v. FCC, supra.

government, currently is involved in technical coordination with INMARSAT and other providers of Mobile-Satellite Service. As providers of satellite service worldwide are well aware, such coordination is a necessary component of providing communications service from satellites, and can be time-consuming and frustrating. However, AMSC has made no showing, in its comments on the referenced rulemaking petitions, or elsewhere, that such coordination will not succeed, or that AMSC will not be able to provide adequate service using the spectrum allocated to it, within the United States, on a monopoly basis.

Moreover, AMSC, until very recently, has not proposed to provide voice service to handheld mobile units. Its proposal to provide voice service to handheld units did not surface until after the filing of the applications of the low-Earth orbit satellite proponents. Now, AMSC, wants, indeed, demands that it be ceded additional spectrum, so that it can address the handheld voice market. For many reasons, LQSS submits that the Commission should decide to provide for such service from low-Earth orbit systems, not the geostationary satellite system of AMSC. As LQSS discussed in its initial comments with AMSC's current satellite design it cannot adequately address the handheld voice market because the small size of its spacecraft antenna lacks the power needed to provide near toll-quality voice to a large number of users.

Even apart from AMSC's greed in seeking additional spectrum -- the same spectrum applied for by low-Earth orbit systems which it apparently views as fierce competitive threats -- AMSC does not address the possibility of obtaining additional spectrum other than the RDSS bands to meet the purported needs of its geostationary system. As noted above, AMSC has not shown even that it needs more spectrum, let alone in the RDSS bands. Were there in fact a demonstrated need, numerous alternatives may be available for geostationary service, as pointed out by LQSS in its comments, as well as in the comments of other parties. These alternatives include:

1) Maritime Mobile-Satellite bands, 1530-1544 MHz and 1626.5-1645.5 MHz, for which AMSC has a pending application before the FCC;

2) Other bands, such as 2110-2130 MHz, 2160-2180 MHz and 2390-2430 MHz, as proposed by the United States for additional allocations for mobile-satellite service at WARC-92;

3) The 1850-1990 MHz band, which is also proposed by the U.S. for allocation, without specification as to direction of transmission or type of orbit, at WARC-92.

With these numerous alternatives for MSS on the horizon, AMSC cannot and has not justified a reallocation of the RDSS bands to MSS. In light of the existence of other alternatives and its failure to consider or analyze them, the conclusion is inescapable that AMSC in this proceeding seeks to block the initiatives of what it views as potential competitors and to cut off the threat that the services proposed by those competitors will be more highly valued in the marketplace than its own.

IV. AMSC's Petition Is at Odds with the U.S. Position at WARC-92

AMSC's approach is profoundly at odds with the position of the United States for WARC-92. In fact it, it would be fair to say that AMSC is looking a gift horse in the mouth. The U.S. Industry Advisory Committee (IAC) worked for months to develop proposals to the Commission on the future bandwidth requirements for MSS, as well as possible frequency bands for additional allocations. The IAC recommended substantial additional bandwidth for MSS and suggested numerous alternative bands for U.S. proposals, some of which (as discussed above) were adopted for the U.S. position. The IAC, the Commission, and the U.S. government also adopted proposals to permit the provision of RDSS/MSS service in the RDSS bands, recognizing the importance of this new technology.

AMSC's Petition for Rulemaking is inconsistent with the United States WARC-92 position. The U.S. delegation will be working hard to obtain additional spectrum for MSS, which AMSC can apply to use, as well as allocation revisions to permit low-Earth orbit satellites. AMSC has chosen to ignore the U.S. position (even though it contains reallocation proposals to MSS) and instead to take a position that undercuts the U.S. proposals and sends conflicting signals to other administrations on the eve of the Conference.

This inconsistency and the negative effect of it on a unified U.S. strategy for WARC-92 alone provides sufficient justification to dismiss AMSC's Petition for Rulemaking or at a minimum, to defer consideration of it until after conclusion of a rulemaking with respect

to the above-captioned petitions and those of LQSS and Motorola.

V. AMSC's Technical Analysis of Applications Should Not Be Considered in the Context of the Petitions for Rulemaking

AMSC's filing with regard to the above rulemaking petitions reads like a petition to deny the applications rather than comments on the rulemaking petitions which are the subject of this proceeding. For example, AMSC inappropriately addresses technical matters contained in the applications of the petitioners. LQSS suggests that the Commission dismiss the AMSC "Comments" and disregard the technical matters raised by AMSC inappropriate to proposed revisions to the RDSS rules.

Were the Commission to entertain the "Comments", however, it should be noted that AMSC's technical arguments require close analysis. At best, they are based on erroneous assumptions. At worst, they are deliberately slanted to support AMSC's conclusion that the RDSS spectrum should be reallocated for GSO MSS systems and "given" to AMSC. LQSS does not here address in detail AMSC's technical analyses because those analyses are focused on the applications of TRW, Constellation and Ellipsat and those entities are in the best position to respond to AMSC. However, in response to AMSC's assertion that LEO RDSS systems cannot provide substantial capacity for RDSS, voice and data, LQSS reiterates and incorporates by reference its initial comments concerning the major limitations on capacity in AMSC's GSO system which attempts to provide voice service to handheld units. In addition, LQSS herein references its application, where LQSS demonstrates a potential capacity of 5,000 simultaneous telephone calls in CONUS with a 24-satellite configuration.[8]

VI. The Concerns Raised by the Radio Astronomy Community Merit Serious Attention

The Committee on Radio Frequencies of the National Academy of Sciences (NAS), in commenting on the petitions for rulemaking, expressed its concern about possible

[8] Application of LQSS, supra, Part II, pp. 173-174.

interference from transmissions of low-Earth orbit satellite systems in portions of the L-band to the Radio Astronomy Service, as well as the impact of S-band operations on Radio Astronomy operations at 4990-5000 MHz. NAS states that the second harmonic of the 2483.5-2500 MHz band "would fall in the 4990-5000 MHz band". NAS theorizes that harmful interference to RAS operations in these bands might occur, particularly if power flux density limits at S-band were relaxed.

LQSS is giving serious consideration to the concerns expressed by NAS, and has under development a paper analyzing potential interference and methods for sharing between LEO RDSS/MSS systems and the Radio Astronomy Service. The preliminary analysis made by LQSS indicates that a CDMA system, such as LQSS proposes, will have the capability of geographic avoidance of RAS sites. Other methods of avoiding interference also are being analyzed.

LQSS suggests that the Commission address the concerns of the Radio Astronomy Service in the context of the proposed rulemaking as well as refer this matter to any Industry Advisory Committee which may be formed to address technical coordination among LEO RDSS/MSS systems and between such systems and other services.

VI. The Commission Should Not Adopt the Constellation Approach of Spectrum Division Among LEO RDSS/MSS Systems

In its application, as well as its rulemaking petition, Constellation proposes that each authorized LEO RDSS/MSS systems be allocated a 2 MHz portion of spectrum. LQSS suggests that such an approach would be unwise for several reasons. First, this approach would require all the systems to adopt the technical approach of the Constellation system. Second, allocation of such a small amount of spectrum would limit system capacity, thereby affecting system economics and system viability, and ultimately, the public interest. Third, a spectrum division approach is not conducive to development of new ways of sharing spectrum, but would merely perpetuate the segmented and inefficient approach to spectrum used in many services today.

For these reasons, LQSS asks that the Commission not include the approach proposed by Constellation in any rulemaking inquiry.

VII. Conclusion

AMSC is clearly the dog in the manger in this proceeding. For the important public interest reasons discussed above, AMSC's petition should not be considered at this time. AMSC's approach ignores other alternatives that may be available for GSO MSS systems, undercuts the U.S. WARC-92 position, and would eliminate the introduction of innovative LEO technology and services in the near future. Constellation's spectrum division approach also should not be adopted. The Commission could initiate a rulemaking focusing on limited revisions to the RDSS rules, but revisions which will enable timely introduction of LEO RDSS/MSS by multiple systems, to the benefit of the United States and its consumers of telecommunications service.

Respectfully submitted,
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November 14, 1991

CERTIFICATE OF SERVICE

I, Andrew Taylor, hereby certify that I have on this 14th day of November, 1991 caused to be sent copies of the foregoing "Reply Comments of Loral Qualcomm Satellite Services, Inc." by U.S. mail, postage prepaid, to the following:

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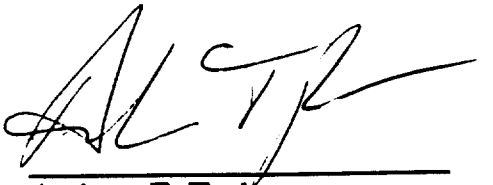

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